

*Concluded
D1*

a current sense terminal formed on said opposing side of the semiconductor chip,
wherein electrical current from said collector is made to flow to both said main
emitter and said current sense terminal, and
electron injection efficiency at said main emitter and said current sense terminal is
0.73 or more.

24. (Amended) The IEGT according to claim 23, wherein said gate is a trench-type
gate embedded in the opposing side of said chip, and
carrier accumulation efficiency of said main emitter and said current sense terminal in
an ON state is greater than that of an insulated gate bipolar transistor (IGBT).

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D2*

25. (Amended) A voltage-driven power semiconductor device, comprising:
a chip-like injection enhanced gate transistor (IEGT) having a collector on one side,
and further having a main emitter, a current sense terminal, and a gate on an opposing side
which opposes said one side, electrical current from said collector being made to flow to both
said main emitter and said current sense terminal, and electron injection efficiency at said
main emitter and said current sense terminal being 0.73 or more;

a plate-like collector electrode terminal arranged on said one side of said IEGT and
electrically connected to said collector; and

a plate-like emitter electrode terminal arranged on said opposing side of said IEGT
and electrically connected to said main emitter,

wherein said voltage-driven power semiconductor device is a press-contacting type
package,

said collector of said power semiconductor device is pressed by said plate-like
collector electrode terminal so that said collector and said collector electrode terminal are
electrically connected together, and

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said main emitter of said power semiconductor device is pressed by said plate-like emitter electrode terminal so that said main emitter and said emitter electrode terminal are electrically connected together.

26. (Amended) The voltage-driven power semiconductor device according to claim 25, wherein said gate is a trench-type gate embedded in said opposing side of said chip, and carrier accumulation efficiency of said main emitter and said current sense terminal in an ON state is greater than that of an insulated gate bipolar transistor (IGBT).

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S3
CI
cont'd.
27. (Amended) A voltage-driven power semiconductor device, comprising:
a chip-like voltage-driven power semiconductor element having a collector on one side, a main emitter, a current sense terminal, and a gate on an opposing side which opposes said one side, electrical current from said collector being made to flow to both said main emitter and said current sense terminal;

a plate-like collector electrode terminal arranged on said one side of said power semiconductor device and electrically connected to said collector; and
a plate-like emitter electrode terminal arranged on said opposing side of said power semiconductor device and electrically connected to said main emitter,

wherein said voltage-driven power semiconductor device is a press-contacting type package,

said collector of said power semiconductor device is pressed by said plate-like collector electrode terminal so that said collector and said collector electrode terminal are electrically connected together, and

said main emitter of said power semiconductor device is pressed by said plate-like emitter electrode terminal so that said main emitter and said emitter electrode terminal are electrically connected together.

28. (Amended) The voltage-driven power semiconductor device according to claim 27, wherein said power semiconductor element is an injection enhanced gate transistor (IEGT),

carrier accumulation efficiency of said main emitter and said current sense terminal in an ON state is greater than that of an insulated gate bipolar transistor (IGBT), and

electron injection efficiency at said main emitter and said current sense terminal is

0.73 or more.

*C1 sub 3
contd.* 29. (Amended) A voltage-driven power semiconductor device, comprising:
a plurality of voltage-driven power semiconductor elements connected in series and in parallel, said power semiconductor elements including semiconductor chips and said semiconductor chips having collectors on one side, and main emitters, at least one current sense terminal, and gates on an opposing side which opposes said one side, electrical current from said collectors being made to flow to both said main emitters and said at least one current sense terminal;

a plate-like collector electrode terminal arranged on said one side of said plurality of power semiconductor elements, and electrically connected to said collectors; and

a plate-like emitter electrode terminal arranged on said opposing side of said plurality of power semiconductor elements and electrically connected to said main emitters,

wherein said voltage-driven power semiconductor device is a press-contacting type package,

said collectors of said power semiconductor elements are pressed by said plate-like collector electrode terminal so that said collectors and said collector electrode terminal are electrically connected together, and

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C2 Considered

said main emitters of said power semiconductor elements are pressed by said plate-like emitter electrode terminal so that said main emitters and said emitter electrode terminal are electrically connected together.

Please add the following new Claims 31 and 32 as follows:

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S5

31. (New) A voltage-driven power semiconductor device comprising:
a plurality of voltage-driven power semiconductor elements connected in series and in parallel, said power semiconductor elements including semiconductor chips and said semiconductor chips having collectors on one side, and main emitters, at least one current sense terminal, and gates on an opposing side which opposes said one side, electrical current from said collectors being made to flow to both said main emitters and said at least one current sense terminal, and said gates being a trench-type gate embedded in said opposing side;
a plate-like collector electrode terminal arranged on said one side of said plurality of power semiconductor elements, and electrically connected to said collectors; and
a plate-like emitter electrode terminal arranged on said opposing side of said plurality of power semiconductor elements and electrically connected to said main emitters;
wherein said voltage-driven power semiconductor device is a press-contacting type package,
said collectors of said power semiconductor elements are pressed by said plate-like collector electrode terminal so that said collectors and said collector electrode terminal are electrically connected together, and
said main emitters of said power semiconductor elements are pressed by said plate-like emitter electrode terminal so that said main emitters and said emitter electrode terminal are electrically connected together.